

Illustrating the Gaps and Needs in the Training Support of Community Health Workers in India

Summary[1]

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1 Introduction

The paper is the first study in the HCI4D literature that is the first longitudinal study comprising the knowledge gaps of 500 workers over a period of 6 months. It also includes 48 interviews and 1178 questions. These questions were collected during the 144 training sessions between the CHWs and an expert. One of the key goals of the paper is to present how the current learning material and training methods are ineffective.

1.1 Key Findings

One of the key findings in the paper is that there is an acute shortage of health professionals. The situation is even worse in rural areas, with only 3.9 and 4.1 health workers per 10,000 people. Additionally, there is a need to improve the on-the-job support system.

2 What is the problem that is being solved?

It is clear that there is a need for better healthcare facilities in the rural areas of India. To tackle this issue, almost a million ASHAs have been appointed. However, due to the lack of literacy and proper infrastructure, literacy problems, social and institutional problems, and technological barriers, There needs to be a solution that solves all the problems mentioned.

Furthermore, it is quite challenging to implement maternal and intimate healthcare facilities in patriarchal societies.

There is a need of technology for CHWs, particularly in six different health functions:

1. Data collection
2. Communication between health workers

3. Job aids and decision support
4. Health workers' supervision
5. Health promotion
6. Training and access to reference material

Most of the data that is collected is done manually and on paper which can produce errors and is inefficient. Therefore, implementing a solution that is simple to understand and comfortable for ASHAs to use is required.

2.1 Solutions proposed in multiple demographics

MomConnect in South Africa is a solution which provides weekly updates to pregnant women. Kilkari and mMitra are IVR-based solutions in India. Aponjon in Bangladesh is an SMS-based solution.

2.2 Solution proposed in the paper

It is an affordable system which only requires a smartphone, a computer and internet connection on the trainer's side and all of the ASHAs require feature phones with SIM cards (which they already have). The system provides online training sessions, making it easier for both the trainer and the ASHA, to teach and learn without any commute.

The system uses cellphone conference calls to provide interaction between the trainers and the ASHAs, the system plays audio recordings, and the trainer can control whoever speaks. Whenever someone wants to ask a question they press 1 on their cellphone and the trainer can unmute them.

3 What methods have been used to collect and analyze the data?

The authors used convenience sampling and selected a sample size of 500 ASHAs for their analysis (based on the interest and availability of the ASHA).

During the execution of the system a lot of issues arose like network delays but this didn't stop the authors from continuing onwards. For the training sessions, the domain of Home Based Postnatal Care was chosen as it also aligns with the official training curriculum of the ASHAs. 25 batches each with 20 ASHAs were formed and the training was conducted. The questions were noted down, and the expert answered them whenever available (The ASHA received the answer in the next session).

3.1 Data Collection

Each session was recorded and then transcribed (also translated into English). An **inductive thematic analysis** was conducted and the codes were noted after every 200

questions. There were 15 main categories and 131 sub-categories.

The authors then checked the content provided to the ASHAs and looked for any gaps in the material. This analysis could help in **improving the training modules**. Finally, interviews were conducted, from the 500 ASHA workers, 100 were shortlisted and 60 gave consent for the interviews. Lastly, 50 thirty-minute interviews were conducted.

3.2 Data Analysis

After collecting all of the data and analyzing the questions. Now a thorough analysis was conducted to find out the patterns in the problems faced by the ASHA workers. The ASHA workers were keen on learning and asked questions to reduce the gap in their knowledge. The majority of the ASHA workers showed interest in increasing their basic knowledge. Around 13% of the questions asked by the ASHAs were based on knowing more than just factual knowledge like "*Why do healthy infants get milk in ears?*" 12% of the questions were based on severe health conditions and the expert's advice was to provide support to the family as the training of the ASHAs did not cover such cases.

After this analysis, it was noticed that there was a gap in the knowledge of the ASHAs regarding *Routine Patient Care*, *Recognition of Danger Signs*, and *Breastfeeding Support*. The gap in their knowledge could be recognized by mapping the questions and finding the answers from the material provided to them, it was discovered that only 22% of the questions were directly in the material, 15% were partially covered and 63% were missing. This means that there is a need to improve the material provided to them.

3.3 Benefits of this Study

There were several benefits of conducting this study like it was able to pinpoint the lack of complete information in the material. But some of the benefits to the ASHAs as stated by them are listed below:

1. The ASHAs felt more confident as their questions were being answered by an expert.
2. Moreover, they felt respected when they were being called as health workers.
3. Their knowledge increased when their questions were answered.

4 What can be (could have been) done to enhance the work?

1. Although there isn't much to do about the cell reception, having the calls dropped mid conversation is quite an annoyance as rejoining the call would take 2-3 minutes which might make the ASHA miss some of the points mentioned in the call. Therefore, having a projector in a room with a singular online meeting could be a viable solution as it is less likely to get disconnected when on Wi-Fi. Although this would require the ASHAs to be available in a particular room.

2. Sometimes, the ASHAs weren't available due to the timings. So a possible solution would be to include such training sessions during their working hours. As this would help them in handling future patients.

References

- [1] YADAV, D., MALIK, P., DABAS, K., AND SINGH, P. Illustrating the gaps and needs in the training support of community health workers in india. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (New York, NY, USA, 2021), CHI '21, Association for Computing Machinery.